

DP-306711

**SPRAY SYSTEM WITH COMBINED KINETIC SPRAY AND
THERMAL SPRAY ABILITY**

Abstract of the Disclosure

Disclosed is a system and a method for simultaneously applying a kinetic spray coating and a thermal spray coating onto a substrate using a single application nozzle to produce a combined coating. The system may include a higher heat capacity gas heater to permit both the thermal spray and the kinetic spray. The method involves providing two populations of particles to the nozzle simultaneously wherein one population is thermally softened in the nozzle under the spray parameters and the other is not. The system increases the versatility of the spray nozzle and addresses several problems inherent in kinetic spray applied coatings.